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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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EXAMINER: Y

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ART UNIT	PAPER NUMBER
1623	3

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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☒ Claim(s) 1-20 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of Reference Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Interview Summary, PTO-413
☐ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

★ U.S. GPO: 1998-404-496/40517

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 it is not clear if the invention is directed to a compound or composition which renders the claim 1 and the claims depending from claim 1 indefinite. For example, the preamble of claim 1 is drawn to a cellulose acetate (a compound) but the body of the claim appears to contain more than one component (such as cellulose acetate and hemicellulose acetate in step (i) of claim 1).

In claim 1, line 4, the phrase "a part of carboxyl groups" lacks proper antecedent basis which renders the claim indefinite.

In step (i) of claim 1 the phrase "a part...are..." is improper grammatically and one skilled in the art could not understand what applicant intends. Also, what applicant intends to be in "acidic form" is unclear.

Step (ii) of claim 1 sets forth incomplete phrases in the language "alkali metal salt of said acid and an alkaline earth metal of said acid is contained". It appears that more details should be disclosed after the term "contained".

Step (iii) of Claim 1, lines 3 and 4 of claim 2, lines 4 and 5 of claim 3 and step (iii) of claim 17 all contain a parenthetical phrase which is improper. Claims should not contain parenthetical phrases.

In claim 1, line 13; claims 2 and 3, line 2 of each claim; and claim 19, line 4, the term "alkaline metal" does not find proper antecedent basis in claim 1

In Claim 1, line 15; claims 2 and 3, line 4 of each claim; and claim 17, line 12, it is not clear what the term "effective amount" is referring to. The term "effective" as used in the recited

claims is indefinite because the function which is rendered effective is not recited in the claims which renders claim 1 and claims depending therefrom indefinite.

In claim 5, line 5, the term "derivatives thereof" lacks meaning absent further indication as to what particular organic acids are included with "derivatives thereof".

Claims 5, 6 , 7, 15 and 16 set forth improper Markush terminology which renders the claims indefinite.

In claims 11 and 12, the term "slurry" lacks proper antecedent basis.

In claim 14, the term "and/or" is alternative language which renders the claim indefinite.

In claim 14, it is not seen how the component or composition is made further limits the composition of matter. How a component is produced in a composition of matter is of little patentable importance.

In claim 17, line 2 the term "which comprising" is grammatically incorrect.

Claim 20 does not set forth any process steps or procedure for carrying out the invention which renders claim 20 incomplete and indefinite.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (US Patent No. 3,816,150).

Applicants claim a cellulose acetate having the feature wherein a carboxyl group may be bound to at least one member selected from the group consisting of a cellulose acetate and a hemicellulose acetate, in an acidic form.

Ishii et al disclose a process for modifying cellulose acetate wherein in example 1 of the patent Ishii et al disclose the preparation of cellulose acetate maleate wherein the maleate group is within the scope of the claimed carboxyl group in acidic form. Also see the process of claim 1 of the Ishii et al patent wherein other acids including succinic acid, phthalic acid, trimellitic acid and mixtures thereof may be substituted for maleic acid. Also see the process steps disclosed in claim 1 of the Ishii et al patent which involves a process for making modified cellulose acetate objects comprising forming mixed cellulose ester made by esterifying (a) cellulose with (b) acetic acid and (c) polybasic carboxylic acid and treating the form product with an aqueous solution of a water soluble polyvalent metal salt . This process disclosed by Ishii et al is within the scope of the process disclosed in claim 17 of the instant application. See column 1, lines 59-61 of the Ishii et al patent wherein alternatively the process of the Ishii et al patent may also be employed in which solid cellulose acetate flakes are prepared initially and they are then mix-esterified. The instant claims differ from the Ishii et al patent by reciting the acid dissociation exponent pKa value of the acid. However, some of the acids disclosed in the Ishii et al patent are identical to the acids recited in the instant claims (e.g. succinic acid). One skilled in the art would expect analogous acids to have similar pKa values. The other reaction condition limitations disclosed in the independent claims are noted but do not set forth any information that is out side the spirit and scope of the Ishii et al patent and therefore are not of patentable moment. One having ordinary skill in the art would have been motivated to employ the process of the prior art with the expectation of obtaining the desired product because the skilled artisan would have expected the analogous starting materials to react similarly. The reaction steps have been shown to be old and applicant bears the burden to present reason or authority for believing that a group or the starting

compounds would take part in or affect the basic reaction and thus alter the nature of the product or the operability of the process.

5. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo et al (US Patent No. 5,240,665) in view of Ishii et al (US Patent No. 3,816,150).

Applicants claim a dope containing the cellulose acetate according to claim 1.

The Seo et al patent discloses a cellulose acetate/acetone dope solution (see column 1, line 31-34) which is used in the production of cellulose acetate fiber using a dry spinning technique. The instant claims differ from the Seo et al patent by disclosing a cellulose acetate bound by carboxyl groups in acidic form. Cellulose acetate bound by carboxyl groups in acidic form is well known in the art as suggested in the Ishii et al patent which discloses modifying cellulose acetates by mix-esterifying dibasic carboxylic acids such as maleic acid, succinic acid, phthalic acid, trimellitic acid and mixtures thereof with the cellulose acetate (see column 1, lines 41-61). The modified cellulose acetate of the Ishii et al patent can be form into films and fibers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the cellulose acetate of the Seo et al patent for the modified cellulose acetate of the Ishii et al patent, as evidence by the Ishii et al patent, that modification of the cellulose acetate with a dibasic carboxylic acid increases the solvent resistant of cellulose ester fibers.

6. All the claims are rejected.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. White whose telephone number is (703) 308-4621. The examiner can normally be reached on Monday-Friday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the primary examiner signing this office action, James O. Wilson, can be reached on (703) 308-4624. The fax phone number for this Group is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1235.

E. White
White
February 23, 1999

JAMES O. WILSON
PRIMARY EXAMINER
GROUP 1600